WTP-8865 series

User's Manual

P/N:205G00WTP88650, Version V1.5

Copyright © 2011, ALL RIGHTS RESERVED.

All other brand names are registered trademarks of their respective owner

Copyright Notice

Copyright © 2011
All Rights Reserved.
Printed in Taiwan.

The information contained in this document is subject to change without any notices.

Acknowledgments

Greeting & Setup

Thank you for purchasing the WTP-8865 Panel PC. We wish that this unit will be durable and reliable in providing your needs. Please follow the instructions below to ensure the unit continues to have high performance

Unpacking

After opening the carton, there will be a unit with an accessory box. Examine the contents to see if there are damages to the unit and if all accessories are present.

Setting up

Please read this manual carefully and remember to keep this manual for future reference.

Safety Instructions & Cleaning

The unit has undergone various tests in order to comply with safety standards. Inappropriate use may be dangerous. Please remember to follow the instructions below to insure your safety during the installation and operating process.

Transporting & Placement of unit

1. When moving the unit on a cart; be very cautious. Quick stops, excessive forces and uneven surfaces may cause the cart to overturn thus risking the unit to fall to the ground.

2. If the Monitor display unit does fall to the ground, immediately turn the power off and disconnect cords. Then contact a service technician for repairs. Continual use of the unit may result cause a fire or electric shock. Also, do not repair the unit on your own.

2. Having two or more people transporting the display unit is recommended. In addition, when installing the open frame by suspending it also requires two or more people.

3. Before suspending the unit, make sure the material used for suspension is sturdy and stable. If not properly suspended, the display unit may fall and cause serious injury to people standing nearby as well as to the unit itself.

4. If you wish to mount the display unit, remember to use only the mounting hardware recommended by the manufacturer.

Electrical and Power Source Related

1. This Monitor display unit must operate on a power source as shown on the specification label. If you are not sure what type of power supply used in the area, consult your dealer or local power supplier.

2. The power cords must not be damaged. Applied pressure, added heat, and tugging may damage the power cord.

3. The power cord must be routed properly when setup takes place.

We advise that this aspect measure is to prevent people from stepping on the cords or while the unit is suspended to prevent flying objects from getting tangled with the unit.

4. *Do not overload the AC outlets or extension cords. Electrical shocks or fires may occur from overloading.*

5. *Do not touch the power source during a thunderstorm.*

6. *If your hands are wet, do not touch the plug.*

7. *Use your thumb and index finger, grip firmly on the power cord to disconnect from the electrical socket. By pulling the power cord, may result in damaging it.*

8. *If the unit is not going to be in use for an extended period of time, remember to disconnect the unit.*

9. *Connect the unit to a power source with the same numerical value as spec. label shown. Please use only the power cord provided by the dealer to ensure safety and EMC compliance.*

Various Factors of Environment

1. *Do not insert objects into the openings.*
2. *Do not have liquids seep into the internal areas of the Monitor display unit.*
3. *Having liquids seep in or inserting objects into the unit may result in electric shocks from taking and/or short circuiting the*

internal parts.

4. *Do not place the Monitor display unit in the presence of high moisture areas.*
5. *Do not install the Monitor display unit in a wet environment.*
6. *Do not place near unit near heat generating sources.*
7. *Do not place the unit in a location where it will come in contact with fumes or steam.*
8. *Remember to keep the Monitor display unit away from the presence of dust.*
9. *If water has flow in or seep in, immediately disconnect the open frame unit. Then contact a service technician for repairs.*

Ventilation Spacing

1. *Do not cover or block the openings on the top and back sides of the display unit. Inadequate ventilation may cause overheating thus reducing the lifespan of the unit.*
2. *Unless proper ventilation is present, do not place unit in an enclosed area; such as a built-in shelf. Keep a minimum distance of 10 cm between the display unit and wall.*

Cleaning the unit

(1) Remember to turn off the power source and to unplug the cord from the outlet before cleaning the unit.

(2) Carefully dismount the unit or bring the unit down from suspension to clean.

(3) Use only a dry soft cloth or clean room wiper when cleaning the LCD panel or touch screen surface. Use a soft cloth moistened with mild detergent to clean the display housing.

(4) Remember to avoid having liquids seep into the internal components.

Servicing, Repairing, Maintenance & Safety Checks

1. If the unit is not functioning properly, observe the performance level of the display closely to determine what type of servicing is needed.

2. Do not attempt to repair the Monitor display unit on your own. Disassembling the cover exposes users' to high voltages and other dangerous conditions. Notify and request a qualified service technician for servicing the unit.

3. If any of the following situations occur turn the power source off and unplug the unit. Then contact a qualified service technician

(a) A liquid was spilled on the unit or objects have fallen into the unit.

(b) The unit is soaked with liquids.

(c) The unit is dropped or damaged.

(d) If smoke or strange odor is flowing out of the open frame unit.

(e) If the power cord or plug is damaged.

(f) When the functions of the unit are dysfunctional.

4. When part replacement is needed. Make sure service technician uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. If unauthorized parts are used it may result in starting a fire, electrical shock and/or other dangers.

5. DO NOT OPEN the sealed Enclosure /case of equipment. Once enclosure is disassembled without approval, it will lead in

abnormal operating of water proof gel. For Guarantee of water proof function, please make sure configuration/ peripheral (HDD,RAM, peripherals) has been confirmed to install before shipping.

Battery Installation

Follow below instructions and notice the caution for replacing and disposing of the RTC Lithium battery CR2032 for safety consideration.

CAUTION:

There is danger of explosion, if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instruction.

The specification is subject to change without notice.

Version Change History

Date	Version	Description	Remark
2009/04/22	V1.0	First release	
2009/07/22	V1.1	Update VESA mount information	
2010/01/26	V1.2	Modify 15”ID-II into manual	
2010/05/03	V1.3	1. Modify 12”ID-II into manual 2. DEL 15” 450nits Panel spec 3. DEL 12” XGA Panel spec 4. DEL PCMCIA	
2010/10/7	V1.4	Add data related to wide temp product	
2011/5/4	V1.5	Under wide temperature condition, change storage to SSD only	

Table of Contents

How to Use This Manual XI

System Overview 1

Introduction 1

System View 6

I/O connectors 8

Quick Installation Guide of Full IP65 connectors 9

VESA mount installation 15

Unpacking 16

Getting Started 17

Setting Up the System 17

Installing the Drivers 20

BIOS Setup Information 21

Appendix 48

A. Jumper Setting and Connectors List 48

B. Wake UP on LAN Function 60

How to Use This Manual

This manual is written for the system integrator, PC technician and knowledgeable PC end user. It describes how to configure your WTP-8865 Panel PC to meet various operating requirements. The user's manual is divided into three chapters, with each chapter addressing a basic concept and operation of the server board.

Chapter 1: System Overview - presents what you have inside the box and gives you an overview of the product specifications and basic system architecture for the WTP-8865 Panel PC.

Chapter 2: System Installation - describes how to set up the system.

Chapter 3: BIOS Setup Information - specifies the meaning of each setup parameter, how to get advanced BIOS performance and update to a new BIOS. Additionally, the POST checkpoint list will give you a guide for troubleshooting.

The contents of this manual are subject to change without prior notice. These changes will be incorporated in new editions of this manual.

System Overview

Introduction

WTP-8865 Full IP65 panel PC is a high-performance computing for applications in harsh environments ,that comes with Intel Atom N270 Low Power processor, wide View-angle display (with sunlight readability), Sealing enclosure(6 sides of IP65 certified) and Water proof I/O connectors for PS2, Ethernet , multi-COM port and USB interfaces. In addition, with water resistant bottoms on front panel, WTP-8865 has user-friendly interface for brightness control and a variety of optional wireless for real time communication or navigation.
Besides, for system integrators, a simple, complete, compact and highly integrated system helps you smoothly build an industrial grade solution into your applications. By this concept, WTP-8865 is design with valuable features to serve various field of markets such as food factory, slaughter house, and KIOSK Public Information Terminal.

With WTP-8865, we believe the end user can optimize the workflow of operations and management in daily business.

System Specification

System

CPU	Atom N270 1.6G
FSB	533MHz
Chipset	Intel® 945GSE chipset + ICH7M
BIOS	Award BIOS, ACPI supported
VGA	Intel Generation 3.5 integrated GFX Core(133 MHz) on board
Audio	Realtek ALC286 Audio Codec, 2+2 watts power amplifier
LAN	Marvell 88E8071 Gigabit Ethernet x 2
Memory	One DDR2 SODIMM socket supports up to 2GB
I/O	ICH7M
Serial ATA	Port x 1 with 150 MB/s transfer rate x 1
USB	7 USB 2.0 ports (External *4 ,internal*3)
COM	External *3 internal *2
WDT	Generates system reset; 256 segments, 0, 1, 2…255 sec.

Panel

Panel 12/15

Size	12.1	15.1
Resolution (pixel)	SVGA (800x600)	XGA (1024 x 768)
Active Area (mm)	246.0 x 184.5	304.1 x 228.1
Pixel Pitch (mm)	0.3075x0.3075	0.297
Mode	TN	TN
Number of Colors	262K/16.2M	262K

View Angle (H/V)	160/110	140 / 120
Brightness (cd/m²)	400	350
Contrast Ratio	500:1	700:1
Response Time (ms) (at 25°C)	35	8
Power Consumption (W)	7.3	8.9
Interface	LVDS	LVDS
Supply Voltage (V)	3.3	3.3
Backlight	2 lamps/2 side	2 CCFL
Outline Dimensions (mm)	279x209x11	326.5 x 253.5 x 12
Weight (g)	660	1100
Life time	50000(h)	50000(h)

Touch 12.1”Resistive type

Low reflection Resistive type

15.1” Resistive type

Infrared touch screen type

Storage

HDD 2.5” SATA HDD drive bay x 1 (with anti-vibration mechanism)

CF 1 x bootable Compact Flash slot for CF type I/II storages (Optional CF card)

Expansion

PCI x1 PCI slot x 1(Optional)

Mini-PCI Mini-PCI-e X 1 socket

External I/O

VGA	DB-15 x 1
Audio Jack	Triple (3x1) phone jack connector (Line-in, Line-out, and Mic-in)
USB	USB 2.0 x4
COM	DB-9 x 3(External*3 internal *2)
KB/Mouse	PS/2 Connector x2 for keyboard/mouse
LAN	RJ45 x2 for Gigabit Ethernet

Power

Power Input	DC12V~28V
Power Adapter	AC 90 ~ 264V / 47 ~ 63 Hz / DC input 12V
Power	DC-In connector x 1
Switch	Reset key

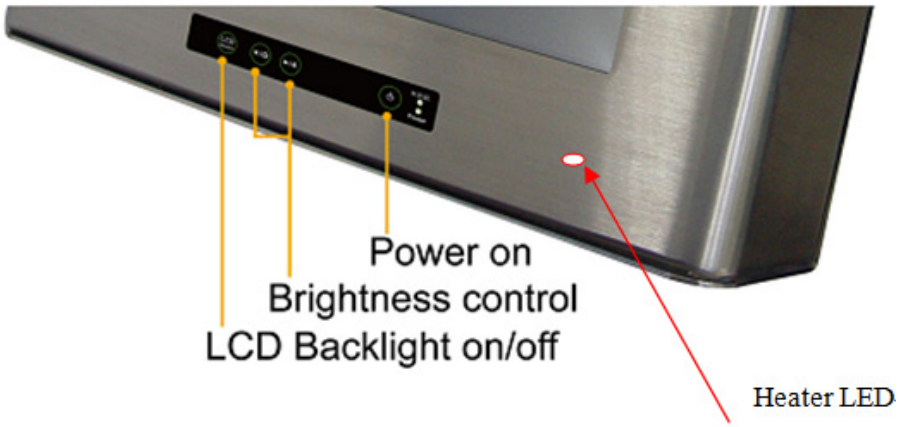
Front Bezel: Indicator/ Hot Key (Power Button//LCD Button// brightness +/-)

Front LED color: Power: Green / Red: HDD accessing

Mechanical & Environmental

Construction	Stainless steel enclosure <besides hot key section>
Dimensions	12.1 350x295x83.2
	15.1 395x345x93.5
Mounting	12.1 VESA Mount 100x100
	15.1 VESA Mount 100x100

For -20~55 degree Celsius operation temperature type



When heater LED on, means heater is working to heat up system to working temperature range.

a. Mother board operation system wake up time

Ambient temperature (Celsius)	*-20*	*-15*	*-10*	*-5*	*0*
mother board system wake up time (minute,±3 minutes)	*35*	*27*	*18*	*9*	*0*

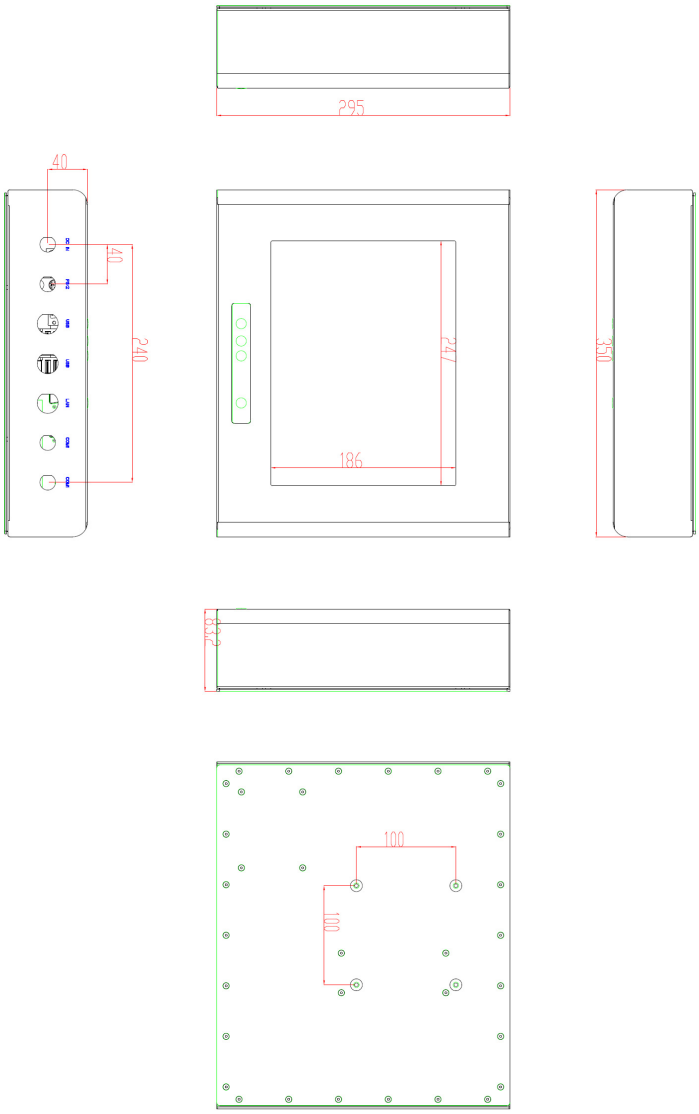
b. Under 0 Celsius degree, LCD backlight should not be turned off.

c. Under 0 Celsius degree, the only way to turn on mother board system is to disconnect and reconnect DC power input.

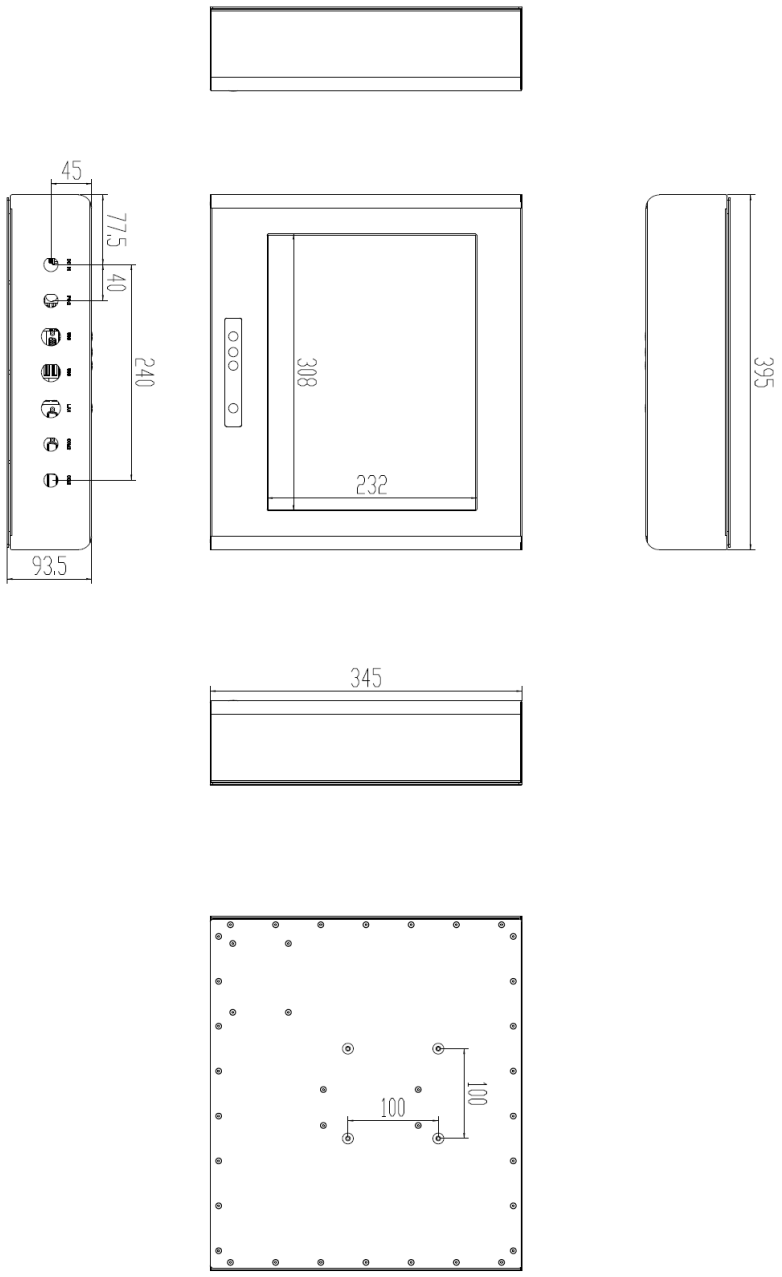
d. Of the heater operation, there is a temperature sensor on the M/B, when power-on, if the sensing temperature is <= 0C, the heater will start to operate for the sensing temperature go up to 5C, then the heater will stop and the computer will start to operate.

System View

WTP-8865-12 Outline Drawing



WTP-8865-15 Outline Drawing

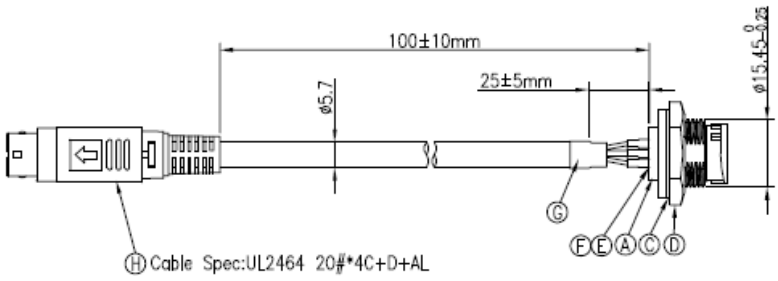


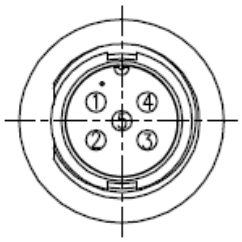
I/O connectors

Quick Installation Guide of Full IP65 connectors

Waterproof connectors pin assignments

Power

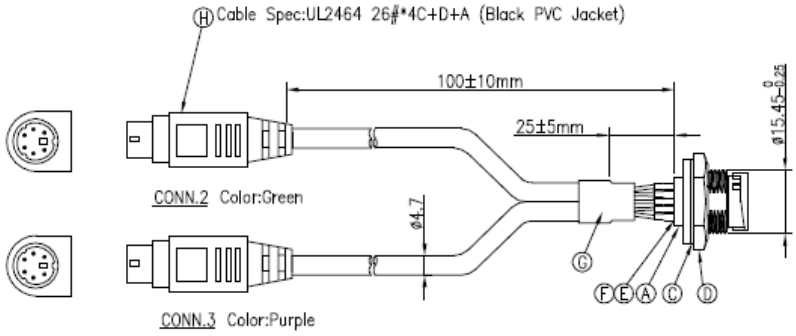


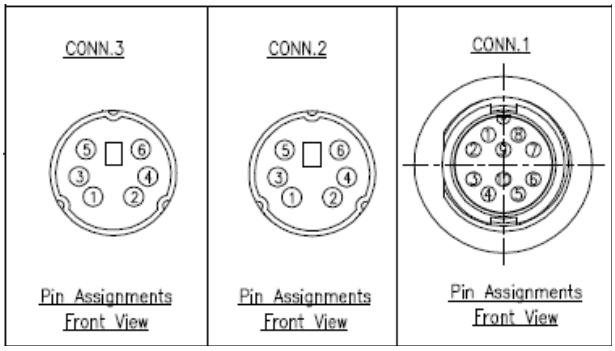


Pin Assignments
Front View

DRAIN	5
ORANGE	4
RED	3
BROWN	2
BLACK	1

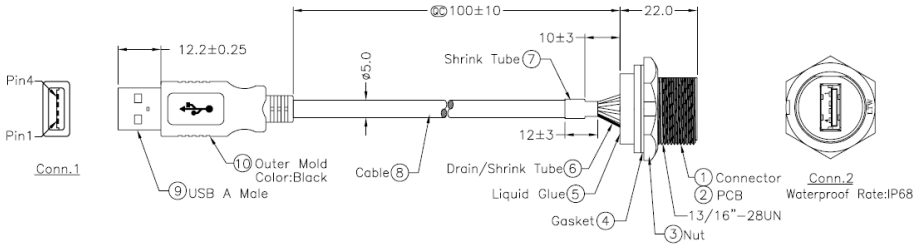
PS2

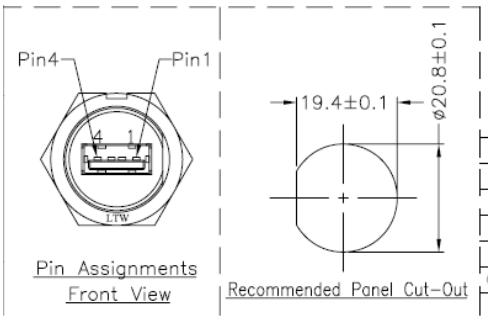




Shield	DRAIN		9
3	YELLOW		8
5	BLUE		7
1	BLACK		6
4	GREEN		5
CONN.3	Shield	DRAIN	10
	3	YELLOW	4
	5	BLUE	3
	1	BLACK	2
	4	GREEN	1
	CONN.2	WIRE COLOR	CONN.1
PIN OUT			

USB



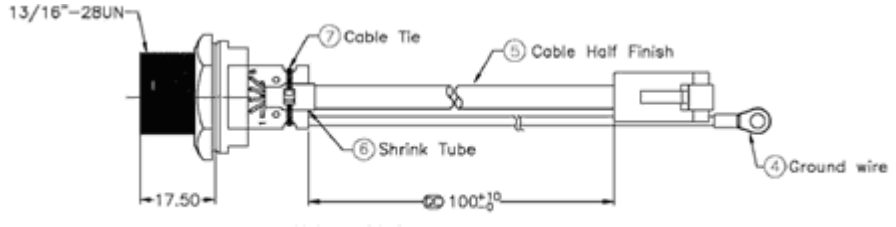


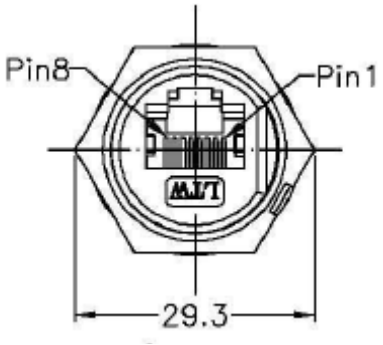
5	Drain	Shield
4	Black 24AWG	4
3	Green 28AWG	3
2	White 28AWG	2
1	Red 24AWG	1
Conn.1	Wire Color	Conn.2

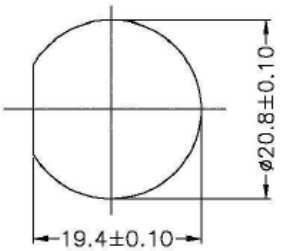
Twist

Pin Out

LAN



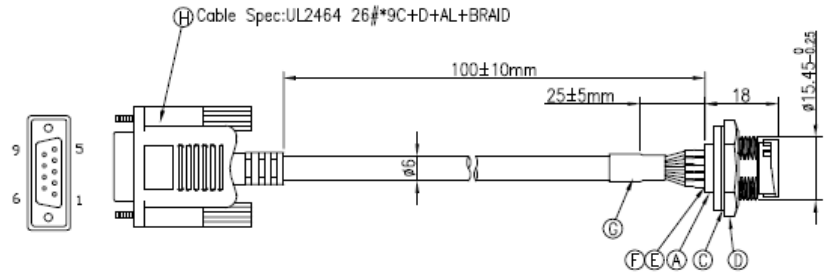




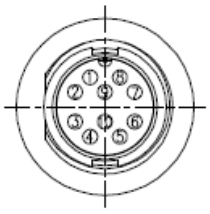
Recommended Panel Cut-Out

Shield	Drain Wire 地線	Shield	
8	Brown 棕	8	Twist
7	Brown/White 棕/白	7	
6	Green 綠	6	Twist
5	Blue/White 藍/白	5	Twist
4	Blue 藍	4	
3	Green/White 綠/白	3	
2	Orange 橘	2	Twist
1	Orange/White 橘/白	1	
Plug	Wire Color	Conn.	
	Pin Out		

COM Port



DB 9 PIN FEMALE
CONN.2



Pin Assignments
Front View

DRAIN	10
GRAY	9
PURPLE	8
BLUE	7
GREEN	6
YELLOW	5
ORANGE	4
RED	3
BROWN	2
BLACK	1

Quick Installation Guide of Full IP65 connectors

Step1. Open the covers on the connectors

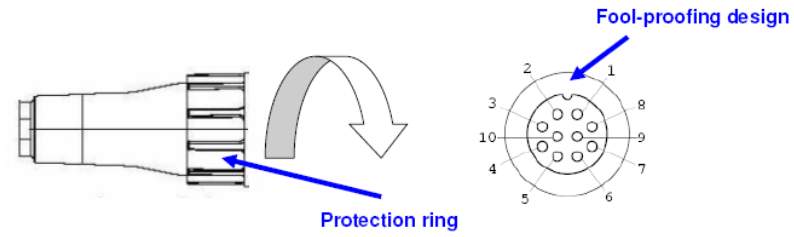
All IO on the button or rear side of WTP-8865 is well protected with a plastic cover. Before installing the WTP-8865 ,user needs to open it.

Step2. Power Cable Connection (5 pin)

The power cable is 5 pin IP65 connecter design in button or rear side. User need to plug in and make the cable fit the connector, then the O-ring on the cable will be squeezed as the protection ring is screwing clockwise.

Step3. PS2/COM cable connection (10 pin)

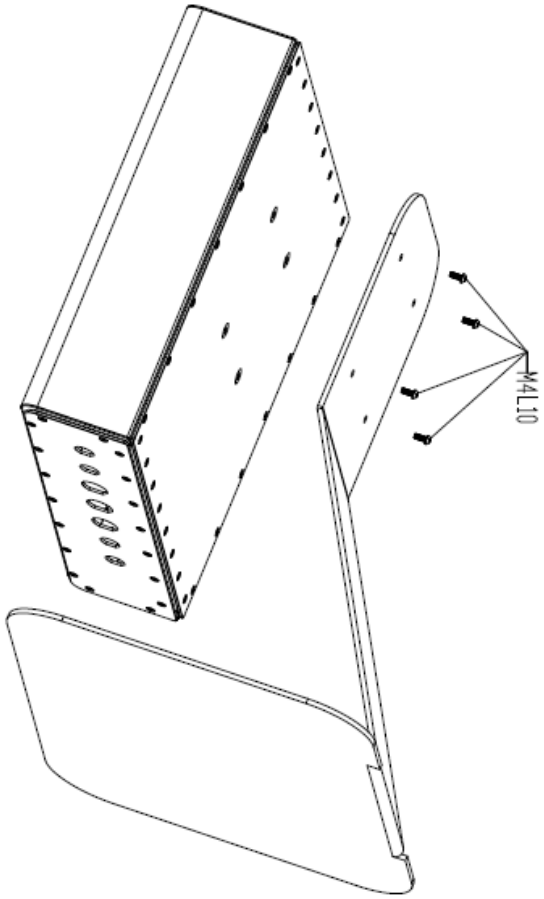
Connect the PS2/COM cable to your PC. The PS2/COM connector is 10 pin designs in button or rear side, User need to plug in and make the cable fit the 10 pin connector, and then the O-ring on the cable will be squeezed as the protection ring is screwing clockwise.



VESA mount installation

Please use the supplied 4 x M4-L10 screws for VESA mounting. And as below VESA mounting holder is just a diagrammatic drawing. You can choose any standard VESA mounting holder to mount our machine.

For use only with UL listed Wall Mount Bracket with minimum weight/load bearing capacity 10 Kg



Unpacking

After unpacking the shipping carton, you should find these standard items:

- The WTP-8865 Full IP65 Panel PC series

- Accessory box including the followings:

  – AC adapter x 1
  – AC power cord x 1
  – CD-ROM for drivers, utility, user manual(in PDF format)

  Optional kits
  – 2 USB Cables with water proof Connectors
  – 2 COM Cables with water proof Connectors
  – LAN Cable with water proof Connector
  – PS2 Cable with water proof Connector

Inspect all the items. If any item is damaged or missing, notify your dealer immediately.

Getting Started

This chapter tells you how to set up the system.

Setting Up the System

The following is a summary of the steps in setting up the system for use.

CAUTION: Make sure that power to the system and each of the devices to be connected is switched OFF before plugging in the connectors.

1. Make any required external connections such as the keyboard, and mouse.
2. Plug the appropriate end of the power cord into the power connector of the system. Then plug the other end of the power cord to an electrical outlet.
3. Press the power switch of the system to turn on the system's power.
4. If necessary, run the BIOS SETUP program to configure the system (see Chapter 3).
5. Install the software drivers if necessary.

Recent releases of operating systems from major vendors include setup programs, which load automatically and guide you through hard disk preparation and operating system installation. The guidelines below will help you determine the steps necessary to install your operating system on the Panel PC hard drive.

NOTE: Some distributors and system integrators may have already pre-installed system software prior to shipment of your Panel PC.

Installing software requires an installed HDD. Software can be loaded in the WTP-8865 Panel PC using any of below methods:

Method 1: Use the Ethernet

You can use the Ethernet port to download software from the net to the HDD that has been pre-installed in WTP-8865 Panel PC

Method 2: Use the COM Port

By connecting another PC to the WTP-8865 Panel PC with an appropriate cable, you can use transmission software to transmit Operation System Software to the HDD that has been pre-installed in the WTP-8865 Panel PC.

Method 3: Use a External CD-ROM

In order to boot up system from USB-CD/DVD drive, please connect USB-CD/DVD drive, turn on computer power, keep on pressing "F11" key, go into BIOS quick boot menu, select "USB-CD ROM", WAIT FOR 20 SECONDS, then press enter, system OS will boot up from USB-CD/DVD drive directly

Then you can use the external CD-ROM to transmit the software to the HDD that has been pre-installed in the WTP-8865 Panel PC

Installing the Drivers

After installing your system software, you will be able to set up the LAN, VGA, Audio and USB functions. All drivers are stored in a CD disc, which can be found in your accessory pack.

The various drivers and utilities in the disc have their own text files that help users install the drivers and understand their functions.

BIOS Setup Information

BIOS Introduction

The Award BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports and parallel ports. It also adds virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

BIOS Set up

The Award BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the Award BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

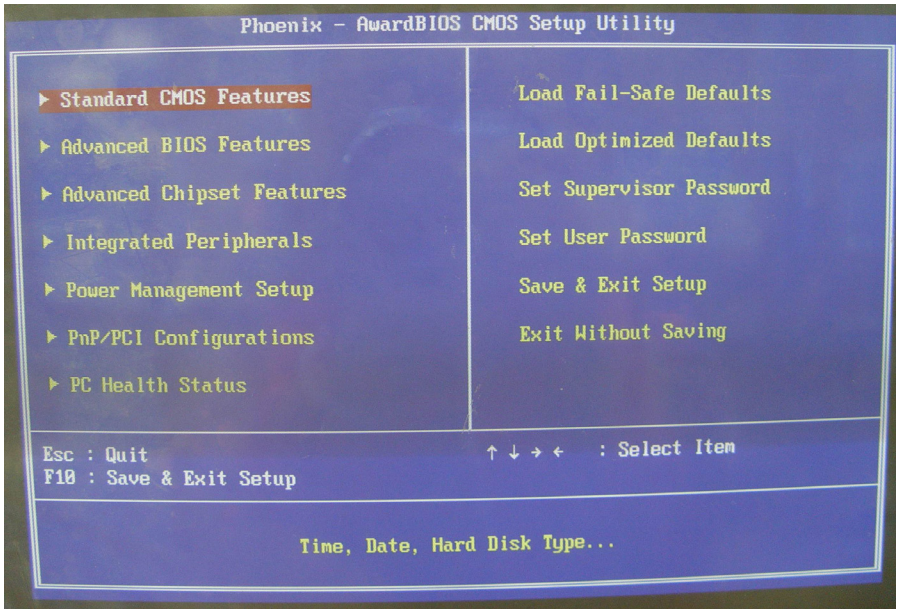
Press <DEL> to Enter Setup

In general, you press the arrow keys to highlight items, <Enter> to

select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

Phoenix - Award BIOS CMOS Setup Utility



The section below the setup items of the Main Menu displays the control keys for this menu. At the bottom of the Main Menu just below the control keys section, there is another section, which displays information on the currently highlighted item in the list.

***Note**: If the system cannot boot after making and saving system changes with Setup, the Award BIOS supports an override to the CMOS settings that resets your system to its default.*

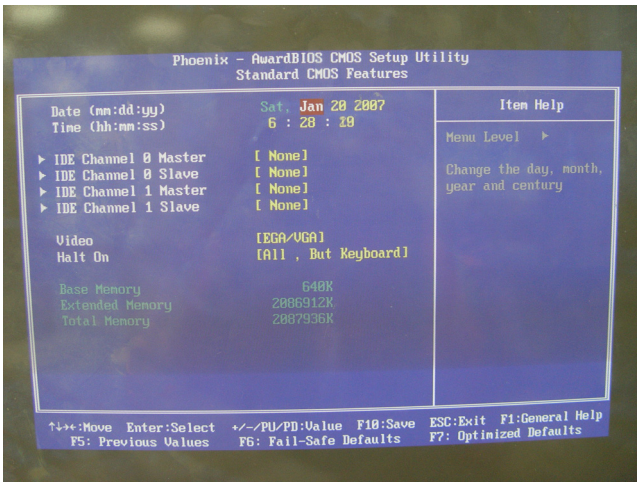
***Warning:** It is strongly recommended that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both Award and your system manufacturer to provide the absolute maximum performance and reliability. Changing the defaults could cause the system to become unstable and crash in some cases.*

Standard CMOS Features

"Standard CMOS Features" choice allows you to record some basic hardware configurations in your computer system and set the system clock and error handling. If the motherboard is already installed in a working system, you will not need to select this option. You will need to run the Standard CMOS option, however, if you change your system hardware configurations, the onboard battery fails, or the configuration stored in the CMOS memory was lost or damaged.

Phoenix - Award BIOS CMOS Setup Utility

Standard CMOS Features


Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features
Date (mm:dd:yy) Sat, Jan 20 2007
Time (hh:mm:ss) 6 : 28 : 19
IDE Channel 0 Master [None]
IDE Channel 0 Slave [None]
IDE Channel 1 Master [None]
IDE Channel 1 Slave [None]
Video [EGA/VGA]
Halt On [All , But Keyboard]
Base Memory 640K
Extended Memory 2086912K
Total Memory 2087936K
Item Help
Menu Level
Change the day, month, year and century
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

At the bottom of the menu are the control keys for use on this menu. If you need any help in each item field, you can press the <F1> key. It will display the relevant information to help you. The memory display at the lower right-hand side of the menu is read-only. It will adjust automatically according to the memory changed. The following describes each item of this menu.

Date

The date format is:

Day :	**Sun to Sat**
Month :	**1 to 12**
Date :	**1 to 31**
Year :	**1999 to 2099**

To set the date, highlight the "Date" field and use the PageUp/ PageDown or +/- keys to set the current time.

Time

The time format is: **Hour : 00 to 23**
Minute : 00 to 59
Second : 00 to 59

To set the time, highlight the "Time" field and use the <PgUp>/ <PgDn> or +/- keys to set the current time.

IDE Channel Master/Slave

The onboard Serial ATA connectors provide Primary and Secondary channels for connecting up to four Serial ATA hard disks. Each channel can support up to two hard disks; the first is the "Master" and the second is the "Slave".

Press <Enter> to configure the hard disk. The selections include Auto, Manual, and None. Select 'Manual' to define the drive information manually. You will be asked to enter the following items.

Capacity: Capacity/size of the hard disk drive
Cylinder: Number of cylinders
Head: Number of read/write heads
Pre comp: Write pre compensation
Landing Zone: Landing zone
Sector: Number of sectors

The Access Mode selections are as follows:
Large (for MS-DOS only)
Auto

Remarks: The main board supports 4 serial ATA ports and are represented in this setting as IDE Channel 2.

Video

This field selects the type of video display card installed in your system. You can choose the following video display cards:

EGA/VGA	For EGA, VGA, SEGA, SVGA or PGA monitor adapters. (default)
CGA 40	Power up in 40 column mode.
CGA 80	Power up in 80 column mode.
MONO	For Hercules or MDA adapters.

Halt On

This field determines whether or not the system will halt if an error is detected during power up.

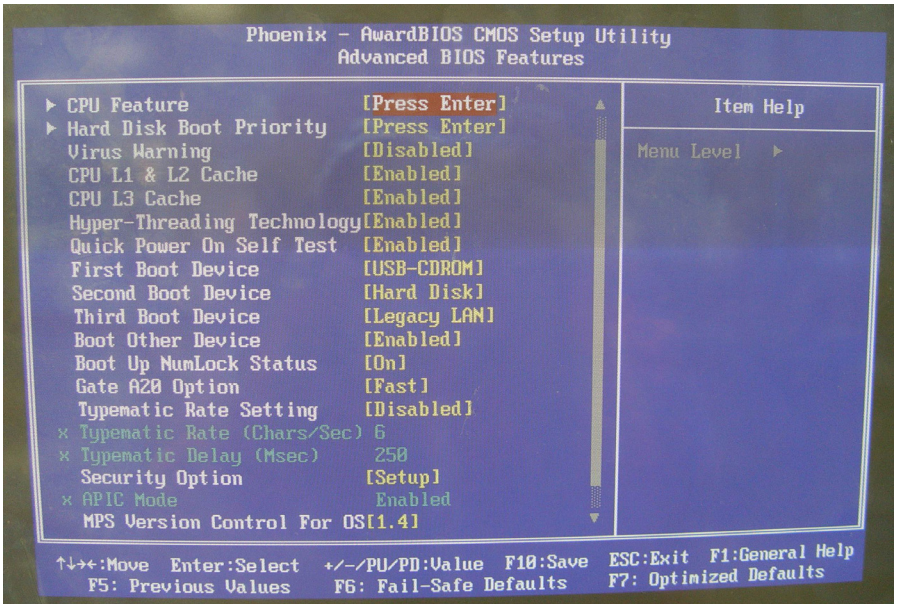
All errors	Whenever the BIOS detect a non-fatal error, the system will stop and you will be prompted.
No errors	The system boot will not be halted for any error that may be detected.
All,But Keyboard	The system boot will not be halted for a keyboard error; it will stop for all other errors

Advanced BIOS Features

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

Phoenix - Award BIOS CMOS Setup Utility

Advanced BIOS Features


Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features
CPU Feature [Press Enter]
Hard Disk Boot Priority [Press Enter]
Virus Warning [Disabled]
CPU L1 & L2 Cache [Enabled]
CPU L3 Cache [Enabled]
Hyper-Threading Technology [Enabled]
Quick Power On Self Test [Enabled]
First Boot Device [USB-CDROM]
Second Boot Device [Hard Disk]
Third Boot Device [Legacy LAN]
Boot Other Device [Enabled]
Boot Up NumLock Status [On]
Gate A20 Option [Fast]
Typematic Rate Setting [Disabled]
x Typematic Rate (Chars/Sec) 6
x Typematic Delay (Msec) 250
Security Option [Setup]
x APIC Mode Enabled
MPS Version Control For OS[1.4]
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

CPU Feature

Press Enter to configure the settings relevant to CPU Feature.

Hard Disk Boot Priority

With the field, there is the option to choose, aside from the hard disks connected, "Bootable add-in Cards" which refers to other external devices.

Virus Warning

If this option is enabled, an alarm message will be displayed when trying to write on the boot sector or on the partition table on the disk, which is typical of the virus.

CPU L1 and L2 Cache

Cache memory is additional memory that is much faster than conventional DRAM (system memory). CPUs from 486-type on up contain internal cache memory, and most, but not all, modern PCs have additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU. These items allow you to enable (speed up memory access) or disable the cache function. By default, these items are Enabled.

CPU L3 Cache

Enabled or Disabled

Quick Power On Self Test

When enabled, this field speeds up the Power On Self Test (POST) after the system is turned on. If it is set to *Enabled*, BIOS will skip some items.

First/Second/Third Boot Device

These fields determine the drive that the system searches first for an operating system. The options available include *Hard Disk*, *CDROM,USB-FDD, USB-ZIP*, *USB-CDROM ,*and *Disabled*.

Boot Other Device

These fields allow the system to search for an OS from other devices other than the ones selected in the First/Second/Third Boot Device.

Boot Up NumLock Status

This allows you to activate the NumLock function after you power up the system.

Gate A20 Option

This field allows you to select how Gate A20 is worked. Gate A20 is a device used to address memory above 1 MB.

Typematic Rate Setting

When disabled, continually holding down a key on your keyboard will generate only one instance. When enabled, you can set the two typematic controls listed next. By default, this field is set to ***Disabled.***

Typematic Rate (Chars/Sec)

When the typematic rate is enabled, the system registers repeated keystrokes speeds. Settings are from 6 to 30 characters per

second.

Typematic Delay (Msec)

When the typematic rate is enabled, this item allows you to set the time interval for displaying the first and second characters. By default, this item is set to ***250msec.***

Security Option

This field allows you to limit access to the System and Setup. The default value is ***Setup***. When you select *System,* the system prompts for the User Password every time you boot up. When you select *Setup,* the system always boots up and prompts for the Supervisor Password only when the Setup utility is called up.

APIC Mode

APIC stands for Advanced Programmable Interrupt Controller. The default setting is ***Enabled***.

MPS Version Control for OS

This option is specifies the MPS (Multiprocessor Specification) version for your operating system. MPS version 1.4 added extended configuration tables to improve support for multiple PCI bus configurations and improve future expandability. The default setting is ***1.4***.

OS Select for DRAM > 64MB

This option allows the system to access greater than 64MB of DRAM

memory when used with OS/2 that depends on certain BIOS calls to access memory. The default setting is ***Non-OS/2***.

Report No FDD For WIN 95

If you are using Windows 95/98 without a floppy disk drive, select YES/NO to release IRQ6. This is required to pass Windows 95/98's SCT test. You should also disable the Onboard FDC Controller in the Integrated Peripherals screen when there's no floppy drive in the system. If you set this feature to Disabled, the BIOS will not report the missing floppy drive to Win95/98.

Full Screen LOGO Show

The logo appears at the right side of the monitor screen when the system is boot up. The default setting is ***Disabled***.

Small Logo (EPA) Show

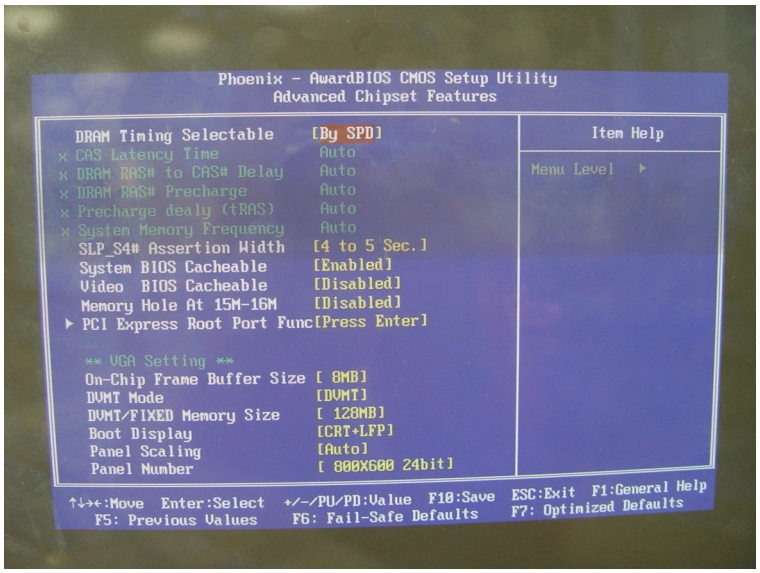
The EPA logo appears at the right side of the monitor screen when the system is boot up. The default setting is ***Disabled***.

Advanced Chipset Features

This Setup menu controls the configuration of the chipset.

Phoenix - Award BIOS CMOS Setup Utility

Advanced Chipset Features


Phoenix – AwardBIOS CMOS Setup Utility
Advanced Chipset Features
DRAM Timing Selectable [By SPD]
x CAS Latency Time Auto
x DRAM RAS# to CAS# Delay Auto
x DRAM RAS# Precharge Auto
x Precharge dealy (tRAS) Auto
x System Memory Frequency Auto
SLP_S4# Assertion Width [4 to 5 Sec.]
System BIOS Cacheable [Enabled]
Video BIOS Cacheable [Disabled]
Memory Hole At 15M-16M [Disabled]
PCI Express Root Port Func [Press Enter]
** VGA Setting **
On-Chip Frame Buffer Size [8MB]
DVMT Mode [DVMT]
DVMT/FIXED Memory Size [128MB]
Boot Display [CRT+LFP]
Panel Scaling [Auto]
Panel Number [800X600 24bit]
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

DRAM Ting Selectable

The logo appears at the right side of the monitor screen when the system is boot up. The default setting is ***[By SPD]***.

SLP_S4# Assertion Width [4 to 5 Sec.]

System BIOS Cacheable

The setting of *Enabled* allows caching of the system BIOS ROM at F000h-FFFFFh, resulting in better system performance. However, if

any program writes to this memory area, a system error may result.

Memory Hole At 15M-16M

In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory space below 16 MB. The choices are *Enabled* and *Disabled*.

PCI Express Root Port Func

By Default.

VGA Setting

The fields under the VGA Setting and their default settings are:

PEG/On Chip VGA Control: Onchip VGA

On-Chip Frame Buffer Size: [8MB]

DVMT Mode: [DVMT]

DVMT/Fixed Memory Size: [128MB]

Boot Display: [CRT+LFP]

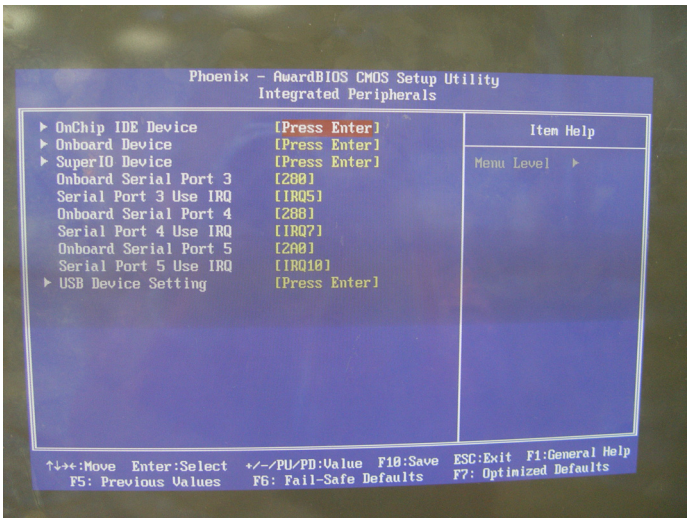
Panel Scaling: [Auto]

Integrated Peripherals

This section sets configurations for your hard disk and other integrated peripherals.

Phoenix - AwardBIOS CMOS Setup Utility

Integrated Peripherals


Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals
OnChip IDE Device [Press Enter]
Onboard Device [Press Enter]
SuperIO Device [Press Enter]
Onboard Serial Port 3 [280]
Serial Port 3 Use IRQ [IRQ5]
Onboard Serial Port 4 [288]
Serial Port 4 Use IRQ [IRQ7]
Onboard Serial Port 5 [2A0]
Serial Port 5 Use IRQ [IRQ10]
USB Device Setting [Press Enter]
Item Help
Menu Level ▸
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

OnChip IDE Device

IDE HDD Block Mode

This field allows your hard disk controller to use the fast block mode to transfer data to and from your hard disk drive.

IDE DMA transfer access

This field allows your hard disk controller to use the fast block mode

to transfer data to and from your hard disk drive.

IDE Primary/Secondary Master/Slave PIO

These fields allow your system hard disk controller to work faster. Rather than have the BIOS issue a series of commands that transfer to or from the disk drive, PIO (Programmed Input/Output) allows the BIOS to communicate with the controller and CPU directly.

The system supports five modes, numbered from 0 (default) to 4, which primarily differ in timing. When Auto is selected, the BIOS will select the best available mode.

IDE Primary/Secondary Master/Slave UDMA

These fields allow your system to improve disk I/O throughput to 33Mb/sec with the Ultra DMA/33 feature. The options are *Auto* and *Disabled*.

OnChip Secondary PCI IDE

This field, by default, is enabled

Onboard Device

Press Enter . This field, by default, is [Auto]

Super IO Device

KBC input clock

Default is [12 MHz]

Power ON Function

This field is related to how the system is powered on – such as with the use of conventional power button, keyboard or hot keys. The default is ***BUTTON ONLY*****.**

Onboard Serial Port

These fields allow you to select the onboard serial ports and their addresses. The default values for these ports are:

Serial Port 1 [3F8/IRQ4]

Serial Port 2 [2F8/IRQ3]

UART Mode Select

This field determines the UART 2 mode in your computer. The default value is ***Normal***. Other options include *IrDA* and *ASKIR*.

Onboard Parallel Port

These fields allow you to select the onboard parallel ports and their addresses.

Parallel Port Mode[SPP/EPP/ECP/ECP+EPP/Normal]

Default is [SPP]

These fields allow you to select the onboard parallel ports and set their modes.

PWRON After RWR-Fail

Default is [Off]

This field sets the system power status whether *on or off* when power returns to the system from a power failure situation.

USB Device Setting

USB 1.0 Controller

The options for this field are *Enabled* and *Disabled*. By default, this field is set to ***Enabled***.

USB 2.0 Controller

The options for this field are *Enabled* and *Disabled*. By default, this field is set to ***Enabled***. In order to use USB 2.0, necessary OS drivers must be installed first. ***Please update your system to Windows 2000 SP4 or Windows XP SP2.***

USB Operation Mode

The options for this field are *Full/Low speed* and *High speed*. By default, this field is set to ***High speed***.

USB Keyboard Function

The options for this field are *Enabled* and *Disabled*. By default, this field is set to ***Enabled***.

USB Mouse Function

The options for this field are *Enabled* and *Disabled*. By default, this field is set to ***Enabled***.

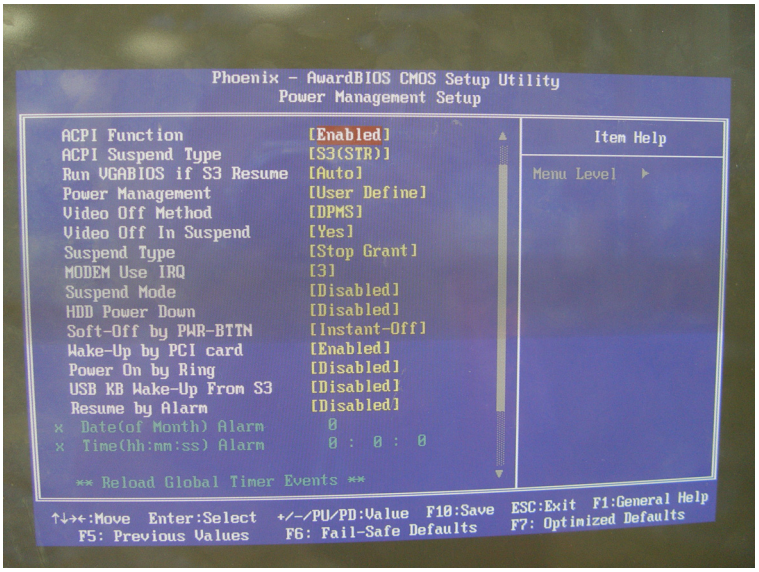
USB Storage Function

The options for this field are *Enabled* and *Disabled*. By default, this field is set to ***Enabled***.

Power Management Setup

Phoenix – Award BIOS CMOS Setup Utility

Power Management Setup


Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup
ACPI Function [Enabled]
ACPI Suspend Type [S3(STR)]
Run VGABIOS if S3 Resume [Auto]
Power Management [User Define]
Video Off Method [DPMS]
Video Off In Suspend [Yes]
Suspend Type [Stop Grant]
MODEM Use IRQ [3]
Suspend Mode [Disabled]
HDD Power Down [Disabled]
Soft-Off by PWR-BTTN [Instant-Off]
Wake-Up by PCI card [Enabled]
Power On by Ring [Disabled]
USB KB Wake-Up From S3 [Disabled]
Resume by Alarm [Disabled]
x Date(of Month) Alarm 0
x Time(hh:mm:ss) Alarm 0 : 0 : 0
** Reload Global Timer Events **
Item Help
Menu Level ▸
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

ACPI Function

Enable this function to support ACPI (Advance Configuration and

Power Interface).

ACPI Suspend Type

The default setting of the ACPI Suspend mode is ***S3(STR)***.

RUN VGABIOS if S3 Resume

The default setting of this field is ***Auto***.

Power Management

This field allows you to select the type of power saving management modes. There are three selections for Power Management.

User Define	Each of the ranges is from 1 min. to 1hr. Except for HDD Power Down which ranges from 1 min. to 15 min.
Min.Saving	Minimum power management
Max.Saving	Maximum power management.

Video Off Method

This field defines the Video Off features. There are three options.

Blank Screen	Writes blanks to the video buffer.
V/H SYNC + Blank	Blank the screen and turn off vertical and horizontal scanning.
DPMS	Default setting, allows BIOS to control the video display.

Video Off In Suspend

When enabled, the video is off in suspend mode. The default setting is ***Yes***.

Suspend Type

The default setting for the Suspend Type field is ***Stop Grant***.

Modem Use IRQ

This field sets the IRQ used by the Modem. By default, the setting is ***3***.

Suspend Mode

When enabled, and after the set time of system inactivity, all devices except the CPU will be shut off. By default, the setting is ***Disabled***.

HDD Power Down

When enabled, and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

Soft-Off by PWR-BTTN

This field defines the power-off mode when using an ATX power supply. The *Instant Off* mode allows powering off immediately upon pressing the power button. In the *Delay 4 Sec* mode, the system powers off when the power button is pressed for more than four seconds or enters the suspend mode when pressed for less than 4 seconds.

Wake-Up by PCI card

This field enables or disables the power on of the system through the LAN.

Power on by Ring

By default, this field is disabled.

USB KB Wake-Up From S3

By default, this field is disabled.

Resume by Alarm

This field enables or disables the resumption of the system operation. When enabled, the user is allowed to set the *Date* and *Time*.

Disabled	
Enabled	Date(of Month) Alarm:
	Set power on date
	The default is 0,it means Everyday
	Time(hh:mm:ss) Alarm Set power on time

****Reload Global Timer Events****

The HDD, FDD, COM, LPT Ports, and PCI PIRQ are I/O events that can prevent the system from entering a power saving mode or can awaken the system from such a mode. When an I/O device wants to gain the attention of the operating system, it signals this by causing

an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

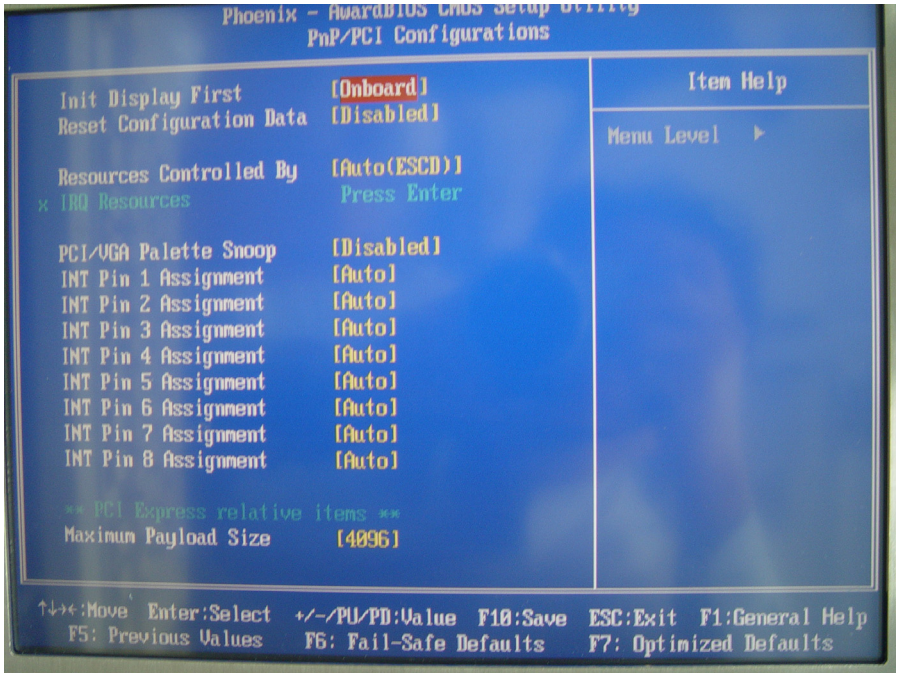
Primary IDE 0 [Disabled]
Primary IDE 1 [Disabled]
Secondary IDE 0 [Disabled]
Secondary IDE 1 [Disabled]
FDD’COM’ LPT port [Disabled]
PCI PIRQ[A-D]# [Disabled]

PNP/PCI Configurations

This option configures the PCI bus system. All PCI bus systems on the system use INT#, thus all installed PCI cards must be set to this value.

Phoenix - AwardBIOS CMOS Setup Utility

PnP/PCI Configurations


PnP/PCI Configurations
Item Help
Menu Level
Init Display First [Onboard]
Reset Configuration Data [Disabled]
Resources Controlled By [Auto(ESCD)]
x IRQ Resources Press Enter
PCI/VGA Palette Snoop [Disabled]
INT Pin 1 Assignment [Auto]
INT Pin 2 Assignment [Auto]
INT Pin 3 Assignment [Auto]
INT Pin 4 Assignment [Auto]
INT Pin 5 Assignment [Auto]
INT Pin 6 Assignment [Auto]
INT Pin 7 Assignment [Auto]
INT Pin 8 Assignment [Auto]
** PCI Express relative items **
Maximum Payload Size [4096]
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Init Display First

The default setting is ***Onboard***

Reset Configuration Data

This field allows you to determine whether to reset the configuration data or not. The default value is ***Disabled.***

Resources Controlled by [Auto(ESCD)]

This PnP BIOS can configure all of the boot and compatible devices with the use of a PnP operating system.

PCI/VGA Palette Snoop

Some non-standard VGA display cards may not show colors properly. This field allows you to set whether or not MPEG ISA/VESA VGA cards can work with PCI/VGA. When this field is enabled, a PCI/VGA can work with an MPEG ISA/VESA VGA card. When this field is disabled, a PCI/VGA cannot work with an MPEG ISA/VESA card.

Maximum Payload Size

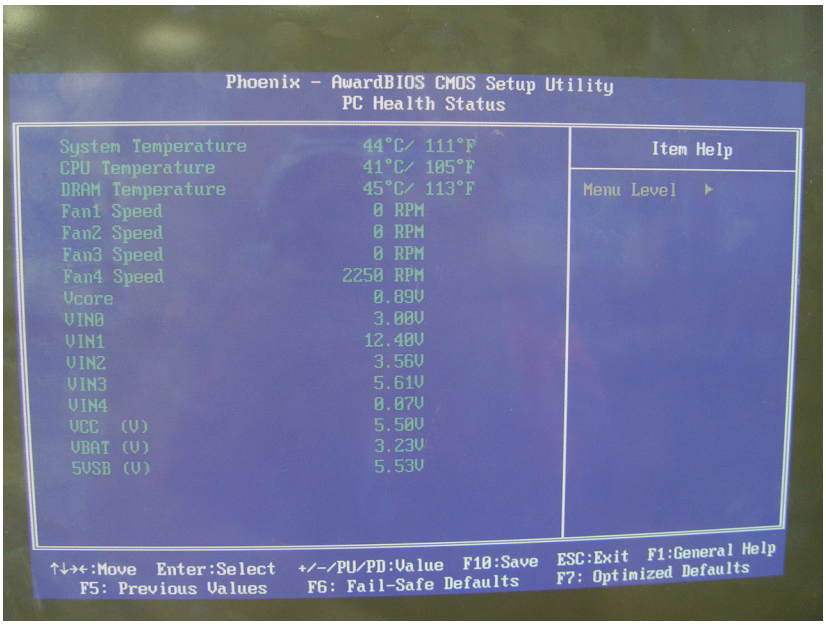
The default setting of the PCI Express Maximum Payload Size is 4096.

PC Health Status

This section shows the parameters in determining the PC Health Status. These parameters include temperatures, fan speeds and voltages.

Phoenix - AwardBIOS CMOS Setup Utility

PC Health Status



Load Fail-Safe Defaults

This option allows you to load the troubleshooting default values permanently stored in the BIOS ROM. These default settings are non-optimal and disable all high-performance features.

Load Optimized Defaults

This option allows you to load the default values to your system configuration. These default settings are optimal and enable all high performance features.

Set Supervisor/User Password

These two options set the system password. Supervisor Password sets a password that will be used to protect the system and Setup utility. User Password sets a password that will be used exclusively on the system. To specify a password, highlight the type you want and press <Enter>. The Enter Password: message prompts on the screen. Type the password, up to eight characters in length, and press <Enter>. The system confirms your password by asking you to type it again. After setting a password, the screen automatically returns to the main screen.

To disable a password, just press the <Enter> key when you are prompted to enter the password. A message will confirm the password to be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

Save & Exit Setup

This option allows you to determine whether or not to accept the modifications. If you type "Y", you will quit the setup utility and save all changes into the CMOS memory. If you type "N", you will return to Setup utility.

Exit Without Saving

Select this option to exit the Setup utility without saving the changes you have made in this session. Typing "Y" will quit the Setup utility without saving the modifications. Typing "N" will return you to Setup utility.

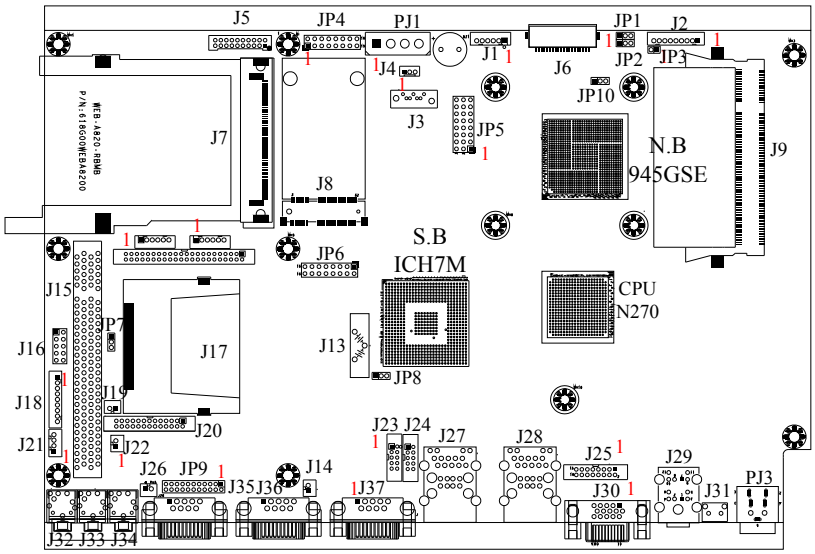
Appendix

A. Jumper Setting and Connectors List

This appendix gives the definitions and shows the positions of jumpers, headers and connectors. All of the configuration jumpers on WTP-8865 Panel PC are in the proper position. The default settings shipped from factory are marked with (default).

Jumpers Location and list

In general, jumpers on the single board computer are used to select options for certain features. To select any option, cover the jumper cap over (SHORT) or remove (NC) it from the jumper pins according to the following instructions. Here NC stands for “Not Connect”.



Jumper Definition

JP1 & JP2 – LVDS Voltage choose

Description	Jumper Setting
+3.3VS	**1-2*(default)***
+5VS	2-3

JP3 – Touch Screen Configuration

Description	ON(Short)	OFF(Open)
Wire	4,8	**5*(default)***

JP5 – LVDS and DVI choose

Description	Jumper Setting
LVDS	***1-2, 4-5, 7-8, 10-11, 13-14, 16-17, 19-20, 22-23 (default)***
DVI	2-3, 5-6, 8-9, 11-12, 14-15, 17-18, 20-21, 23-24

JP6 – SPI BIOS

Description	ON(Short)	OFF(Open)
SPI	1~16 ***(default)***	**1~16**

JP7 – CF_CSEL#

Description	Jumper Setting
Slave	*1-2*
Master	**2-3 *(default)***

JP8 – CMOS CLEAR

Description	Jumper Setting
Normal	***1-2(default)***
CMOS Clear	2-3

JP9 –COM1 Function Selection

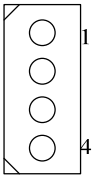
Jumper Setting	Illustration	Description.
5-6,9-11,10-12,15-17,16-18		RS-232
3-4,7-9,8-10,13-15,14-16,21-22		RS-422
1-2,7-9,8-10,19-20		RS-485

JP10 – On board/Off board Touch Panel Selection

Description	Jumper Setting	Touch screen
On board	All open	RES
Off board	1-2	CAP/SAW/IR/Tempered glass

Connector Definition

PJ1 – HDD Power Connector

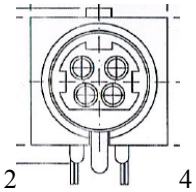


Pin #	Signal Description
1	+12V
2	Ground
3	Ground
4	+5V

PJ2 – Reserve Function.

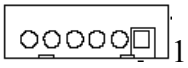
PJ3 – Power Jack Connector

1 3



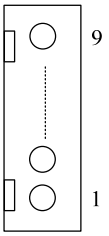
Pin #	Signal Description
1	DC In (+12V~+28V)
2	DC In (+12V~+28V)
3	Ground
4	Ground

J1 – LCD Inverter Interface



Pin #	Signal Description
1	+12V
2	+12V
3	Backlight Adjust
4	Backlight Enable
5	Ground
6	Ground

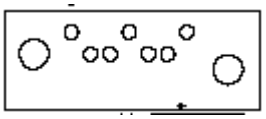
J2 – Touch Panel Interface



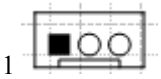
Pin #	Signal Description		
	8-wire	4-wire	5-wire
1	Right Sense	N/A	N/A

2	Left Sense	N/A	N/A
3	Bottom Sense	N/A	N/A
4	Top Sense	N/A	Sense(S)
5	Right Excite	Right	LR(X)
6	Left Excite	Left	LL(L)
7	Bottom Excite	Bottom	UR(H)
8	Top Excite	Top	UL(Y)
9	Ground	Ground	Ground

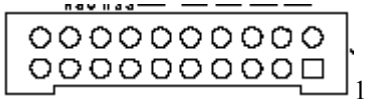
J3 –Standard SATA Interface



J4 – Fan Connect



J5 – GPIO Interface(internal)



Pin #	Signal Description	Pin #	Signal Description
1	GPO 1	2	GPI 1
3	GPO 2	4	GPI 2
5	GPO 3	6	GPI 3
7	GPO 4	8	GPI 4
9	GPO 5	10	GPI 5
11	GPO 6	12	GPI 6
13	GPO 7	14	GPI 7
15	GPO 8	16	GPI 8
17	+5V	18	+5V
19	Ground	20	Ground

J6, J600 – LVDS Interface

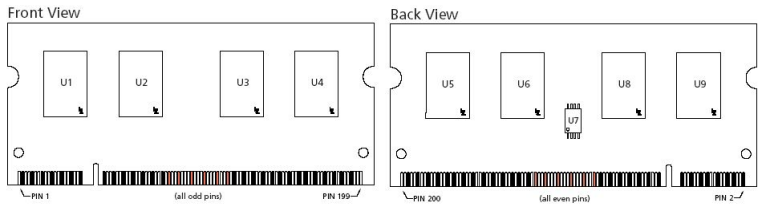
J6 (Channel 1)		J38 (Channel 2)	
Pin #	**Signal Description**	**Pin #**	**Signal Description**
1	+LCD (+5V)	1	+LCD (+5V)
2	+LCD (+5V)	2	+LCD (+5V)
3	Ground	3	Ground
4	Ground	4	Ground
5	A_RxIn0-	5	B_RxIn0-
6	A_RxIn0+	6	B_RxIn0+
7	Ground	7	Ground
8	A_RxIn1-	8	B_RxIn1-
9	A_RxIn1+	9	B_RxIn1+
10	Ground	10	Ground
11	A_RxIn2-	11	B_RxIn2-
12	A_RxIn2+	12	B_RxIn2+
13	Ground	13	Ground
14	A_CKIN-	14	B_CKIN-
15	A_CKIN+	15	B_CKIN+
16	Ground	16	Ground
17	A_RxIn3-	17	B_RxIn3-
18	A_RxIn3+	18	B_RxIn3+
19	Ground	19	Ground
20	Ground	20	Ground

J7 – Standard PCMCIA/CardBus Connector

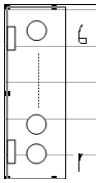
J8– Standard Mini-PCI-E Interface

J9 – DDR2 SO-DIMM Interface

DDR2 SO-DIMM Module



J10,J11 – Internal USB(internal)



Pin #	Signal Description
1	+5VSB
2	+5VSB
3	Data -
4	Data +
5	Ground
6	Ground

J12 – Standard (IDE) Connector(internal)

J13 – RTC Battery

J14 – Power Switch

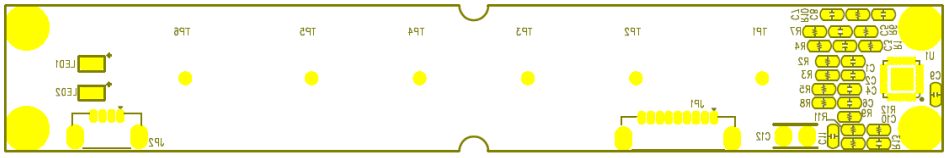
J15 – Standard PCI Slot Interface

J16 – 8051 JTAG Debug

J17 – CF Card Connect

J18,J21 with BB_Board JP1&JP2 (M/B J21 <4Pin>,J18<9Pin>)

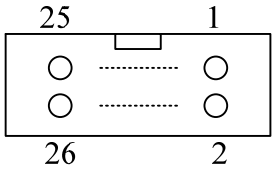
Power/Brightness/Sound Button /LCD_ON/OFF and LED Indicate



JP2 Pin #	Signal Description
1	HDD_LED
2	+5VSB
3	+5VSB
4	POWER_ON
JP1 Pin #	**Signal Description**
1	Power Button
2	+3.3VSB
3	Sound Up
4	Sound down
5	GND
6	Brightness Up
7	Brightness Down
8	GND
9	LCD_ON/OFF

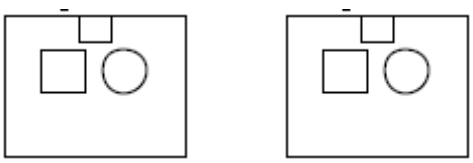
J19 – Internal MIC Connect

J20 – Parallel Port (internal)



Pin #	Signal Description	Pin #	Signal Description
1	Strobe	2	Autofeed
3	Data Bit 0	4	Error
5	Data Bit 1	6	Initialize
7	Data Bit 2	8	Select In
9	Data Bit 3	10	Ground
11	Data Bit 4		Ground
13	Data Bit 5		Ground
15	Data Bit 6		Ground
17	Data Bit 7		Ground
19	Acknowledge		Ground
21	Busy		Ground
23	Paper End		Ground
25	Select		NC

J22, J26 – Passive Speaker Connector

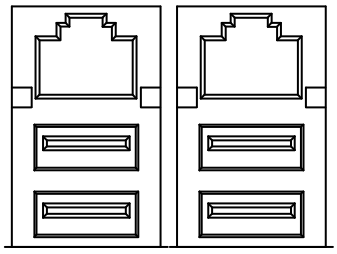


J26(Right Channel)		J22(Left Channel)	
Pin #	Signal Description	Pin #	Signal Description
1	AMP. Out +	1	AMP. Out +
2	AMP. Out -	2	AMP Out -

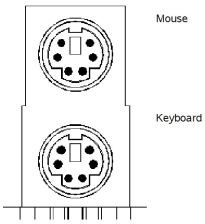
J23,J24 – COM port (Internal)

J25 – DVI Connect (Internal LVDS or DVI only)

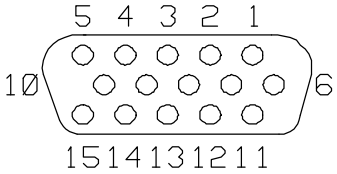
J27,J28 – Ethernet +USB Port



J29 – KB+MS Connector



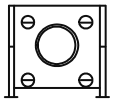
J30 – Display Interface



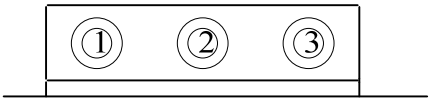
PIN	SIGNAL	DESCRIPTION
1	CRT_CON_RED	Red analog video output
2	CRT__CON_GREEN	Green analog video output
3	CRT__CON_BLUE	Blue analog video output
4	Monitor Sense	NC
5	GND	Monitor Sense
6	GND	Ground
7	GND	Ground

8	GND	Ground
9	VCC	NC
10	GND	Ground
11	Monitor Sense	NC
12	CRT__CONN_DDDA	Data from DDC monitor
13	CRT_CONN_HSYNC	Horizontal Sync control
14	CRT_CONN_VSYNC	Vertical Sync control
15	CRT_CONN_DDCK	Clock to DDC monitor

J31 – Reset Button



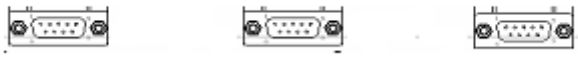
J32,J33,J34 – Audio Jack



Pin #	Signal Description
1(J32)	Line In (stereo) Blue
2(J33)	Microphone (stereo) Pink
3(J34)	Line Out (stereo) Green

J35,J36,J37 – COM3~COM1

COM1 **COM2** **COM3**



Pin #	Signal Description
1	Carrier Detect
2	Receive Data
3	Transmit Data
4	Data Terminal Ready
5	Ground
6	Data Set Ready
7	Request to Send
8	Clear to Send

9	Ring Indicator

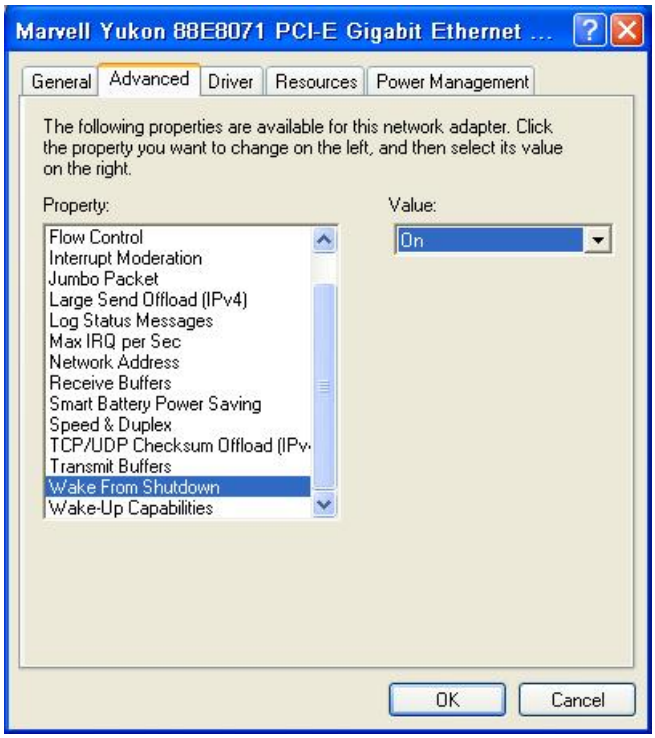
J35– COM1

Pin #	Signal Description		
	RS-232	RS-422	RS-485
1	Carrier Detect	Transmit Data -	Transmit Data -
2	Receive Data	Transmit Data +	Transmit Data +
3	Transmit Data	Receive Data +	NC
4	Data Terminal Ready	Receive Data -	NC
5	Ground	NC	NC
6	Data Set Ready	NC	NC
7	Request to Send	NC	NC
8	Clear to Send	NC	NC
9	Ring Indicator	NC	NC

B. Wake UP on LAN Function

Please make sure the AC power is ON before use the function.

1. Boot into OS (windows XP).
2. In start menu control panel System device manager Network adapters double click Marvell Yukon 88E8071 Advance Wake from Shutdown Item select Wake on Magic packet from power off state.



Please shutdown system and wait for wake on LAN after finish these procedures.